REMARKS

Reexamination and reconsideration of the application as amended are requested. Support for new claim 21 is found from claim 1 together with paragraph [0019] of the specification which states, "In Figure 1, the envelope of ultrasound (which is shown as a focused beam but can be an unfocused or divergent beam) from the transducer 12 ... the ultrasound medical-treatment transducer 12 ...". Support for new claim 22 is found from claim 13.

The examiner's rejection of claims 9-13 and 15-20 as anticipated, under 35 U.S.C. 102, or as obvious, under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Ingle (US 6,216,704). Claims 10-13 depend from claim 9, and claims 16-20 depend from claim 15.

Claim 9 requires an ultrasound beam at a first ultrasound acoustic power density to begin to thermally ablate a tissue ablation depth of an area of patient tissue and requires reducing the ultrasound beam to a lower second ultrasound acoustic power density, based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect, to complete the thermal ablation of the tissue ablation depth of the same area of the patient tissue without re-aiming the ultrasound beam. As described in paragraph [0034] of the specification for a second experiment having a one minute treatment time, wherein the first ultrasound acoustic power density was 84 watts per square centimeter, the onset of the ultrasound-attenuating effect occurred at 35 seconds, and the second ultrasound acoustic power density was 55 watts per square centimeter for the remainder of the one minute treatment, the tissue ablation depth was about 18 millimeters. Compare that to a tissue ablation depth of about 11 millimeters for an ultrasound acoustic power density kept constant at 84 watts per square centimeter throughout a one minute treatment as described in paragraph [0033] of the specification for a first experiment. The second experiment had an increased treatment depth for less total thermal energy compared to the first experiment.

Ingle states, "The generation of harmonics or subharmonics of the fundamental carrier frequency is an indication of the production of cavitation in the tissue, and may be used as a feedback mechanism for adjusting ultrasound power or scanning speed" (see lines 48-52 of

column 25 of Ingle). By this statement, Ingle is describing that, when in operation, his focused ultrasound probe 300 (see lines 4-5 of column 25 of Ingle) has a non-zero ultrasound power and a non-zero scanning speed. A focused ultrasound probe having, when in operation, a non-zero scanning speed is an ultrasound probe which is always re-aiming his focused ultrasound beam. Ingle is teaching that, when cavitation is detected with the scanning ultrasound probe focused at an instant of time on a first treatment region, one should reduce ultrasound power to eliminate the harmful cavitation effect when in the next instant the scanning ultrasound probe will be focused on the next treatment region.

Claim 11 requires (through base claim 9) that the controller reduce ultrasound acoustic power based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-attenuating effect and requires that such effect be indicated by an inception of a proximal hyperechoic region of the patient tissue with distal ultrasound attenuation. This means that to reduce power the controller must receive what amounts to both an indication of an inception of a proximal hyperechoic region of the patient tissue and a same-time indication of distal ultrasound attenuation. The controller will not reduce power if it does not receive what amounts to a same-time indication of distal ultrasound attenuation. Ingle teaches that ultrasound power will be adjusted ("reduced" in the words of the examiner) based upon receiving an indication of an inception of a proximal hyperechoic region of the patient tissue WITHOUT receiving a same-time indication of distal ultrasound attenuation. Ingle does not teach, suggest or describe the limitation of claim 11.

Claim 12 requires a beam of ultrasound at a first setting of a control parameter to begin to thermally ablate a tissue ablation depth of an area of patient tissue and requires the beam of ultrasound at a second setting of the control parameter, based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect, to complete the thermal ablation of the tissue ablation depth of the same area of the patient tissue without re-aiming the beam of ultrasound. Applicants' remarks concerning the patentability of claim 1 over Ingle are equally applicable to claim 12 and are herein incorporated by reference.

Claim 20 requires the limitation of claim 11, and applicants' remarks concerning the patentability of claim 11 over Ingle are equally applicable to claim 20 and are herein incorporated by reference.

New claim 21 requires an unfocused or divergent ultrasound beam. Ingle teaches a focused ultrasound beam.

New claim 22 requires that the control parameter is the ultrasonic frequency of the ultrasound emitted by the medical-treatment transducer. Ingle teaches that the control parameter is the ultrasound power or the scanning speed (see lines 48-52 of column 25).

Inasmuch as each of the rejections has been answered by the above remarks and amended claims, it is respectfully requested that the rejections be withdrawn, and that this application be passed to issue.

Respectfully submitted,

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